

# 385B/385B L

## Hydraulic Excavator

**CAT®**

### Engine

Engine Model	Caterpillar® 3456 ATAAC	
Net Flywheel Power	382 kW	513 hp

### Drive

Maximum Travel Speed	4.5 kph	2.8 mph
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### Weights

Operating Weight - Standard Undercarriage	83 510 kg	183,940 lb
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- General Purpose Boom, R4.4 (14'5") stick, 1678 mm (66") GP Bucket, 750 mm (30") shoes.

Operating Weight - Long Undercarriage	86 160 kg	189,770 lb
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- General Purpose Boom, R4.4 (14'5") stick, 1678 mm (66") GP Bucket, 900 mm (36") shoes.

# 385B/385B L Hydraulic Excavator

*High performance and rugged durability combine to maximize your productivity.*

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## Engine

- ✓ The Cat® 3456 engine meets all new EPA Tier 2, Euro Stage II and MOC Step 2 emission regulations worldwide, and also has the best fuel economy in its class. **pg. 4**

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## Undercarriage and Structures

- ✓ The undercarriage supports the swing bearing and upper structure of the 385B. It is the link between the ground and the upper structure, and must transmit the reaction forces from digging operation to the ground. Therefore, the strength of the undercarriage is a major factor in machine durability. **pg. 5**

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## Hydraulics

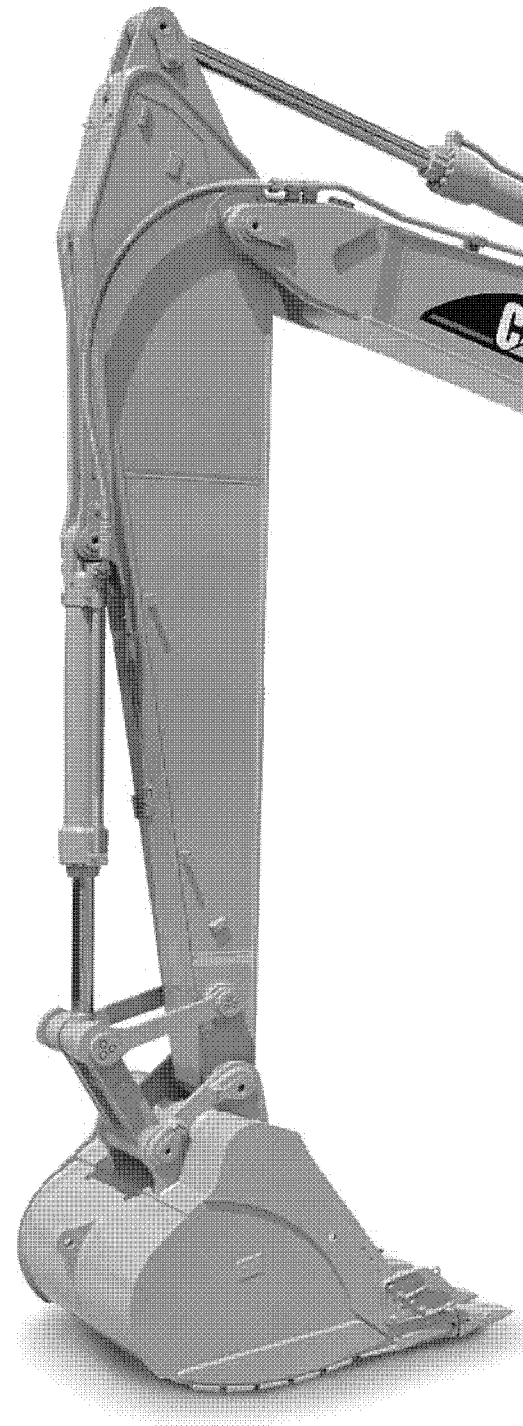
- ✓ Proven PPPC (Proportional Priority Pressure Compensated) system with state-of-the-art electronic control. **pg. 6**

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## Complete Customer Support

Your Cat dealer offers a wide range of services that can be set up under a Customer Support Agreement when you purchase your equipment. The dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement. **pg. 12**

*Outstanding performance.  
High level of sustained production,  
higher deep trenching and pipe-laying  
performance, improved reliability and  
durability increase your productivity  
and lower your operating costs.*



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### Buckets

A wide variety of bucket types, aggressive bucket designs and larger capacity bucket options take advantage of the powerful digging forces and stable base that is offered with the 385B. **pg. 8**

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### Booms, Sticks and Attachments

Three lengths of booms, i.e. reach boom, general purpose boom and mass excavation boom, and six types of sticks are available for the 385B, offering a wide range of reach and digging forces to match the application. **pg. 9**

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### Operator Station

- ✓ Roomy, quiet, automatic climate controlled cab has excellent sightlines to the work area to help keep operator fatigue low and production up throughout the entire shift. **pg. 10**

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### Service and Maintenance

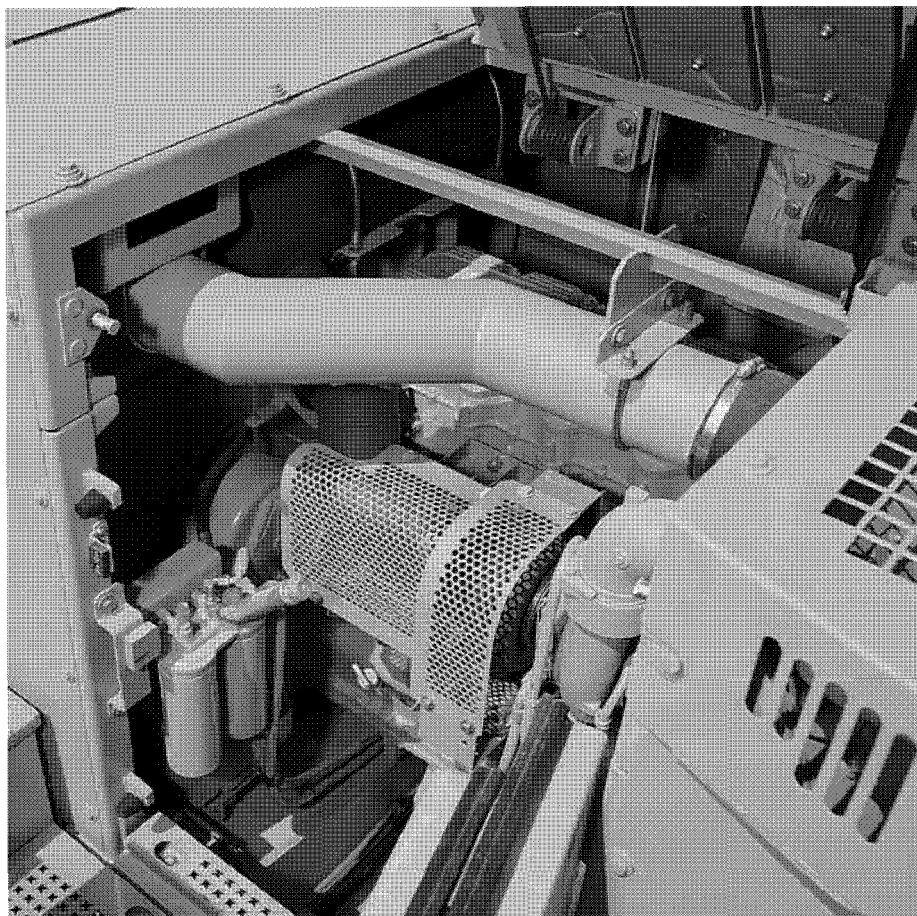
Fast, easy service with advanced filtration, filter access and electronic diagnostics for increased productivity. **pg. 13**



✓ *New Feature*

# Engine

*Built for power, reliability, economy and low emissions.*



**Cylinder Block.** Engine durability starts with a strong foundation — the cylinder block. The 3456 cylinder block consists of a deep-skirt, cast-iron alloy design made from 206 700 kPa (30,000 psi) minimum strength cast iron. Cylinder blocks are cast at Caterpillar's Mapleton foundry, where intensive process control programs ensure that the highest quality is maintained.

**One-Piece Cylinder Head.** The high strength cylinder head of the 3456 is designed for efficient breathing, which helps promote fuel efficiency. The cylinder head and intake air manifold are integrated, so no maintenance items are required such as gaskets, bolts and washers. Coolant flow throughout the cylinder head and high strength materials help deliver long cylinder head life.

**Superior Fuel Economy.** The 3456 features the proven Caterpillar EUI fuel system, with mechanically actuated, electronically controlled unit injectors (EUI), as well as state-of-the-art Advanced Diesel Engine Module (ADEM™ II) electronic controller, for the most precise timing and fuel metering.

**Cooling System.** The 385B layout puts the coolant radiator and oil cooler side by side to increase cooling efficiency and reduce the noise from the cooling system. The parallel layout of the radiator and the oil cooler improves accessibility to the cores of the cooling units, providing easy cleaning.

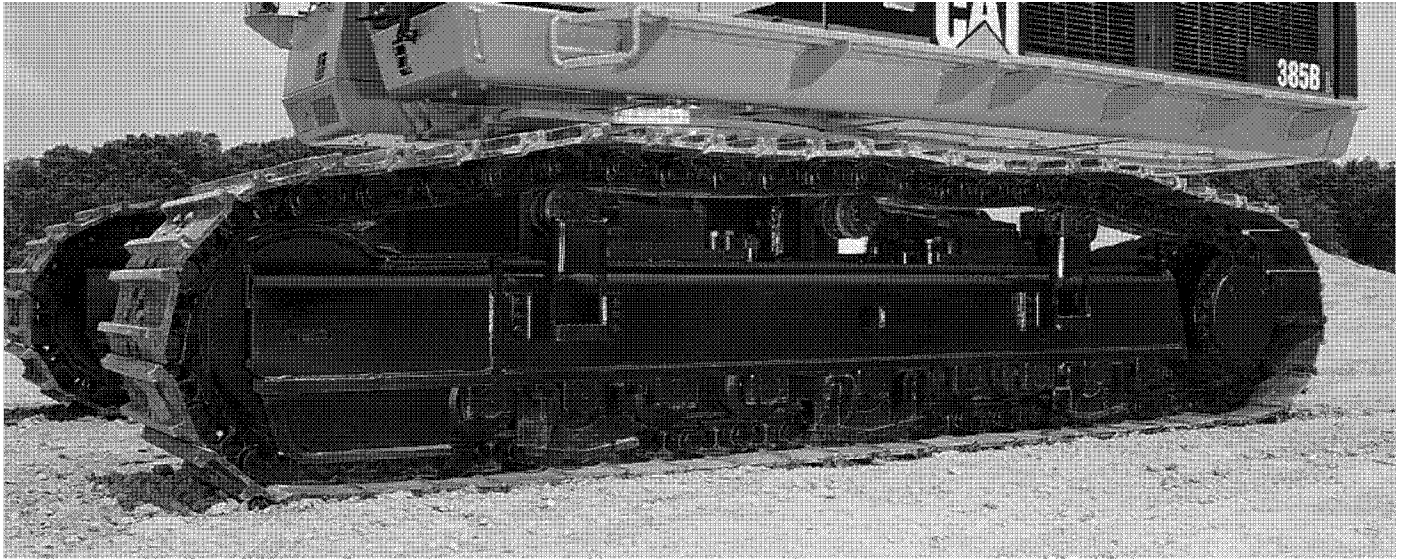
**Emission Measures.** The 3456 engine in the standard configuration meets the following emission regulations:

- (1) EPA Tier 2
- (2) EU Stage II
- (3) MOC Step 2

**Engine Mounts.** The engine is mounted to the main frame using six rubber engine mounts. Those mounts reduce the amount of vibration that is transferred from the engine into the main frame for a smooth and quiet machine.

## Undercarriage and Structures

*Durable undercarriage absorbs stresses and provides excellent stability.*



**Carbody.** To meet transportation requirements, the 385B undercarriage is of a variable gauge type. This design allows the track roller frames to be bolted to the carbody, enabling the machine to be made narrower for ease of transport. The carbody utilizes a new columnless design which allows the swing bearing to be directly mounted on the top plate for more rigidity and strength.

**Track.** The track links are sealed to prevent entry of dirt and are strutted for high strength and impact resistance. Two choices of shoe width are available. Both are heavy-duty double grouser type.

**Track Rollers.** Track rollers are heavy-duty type with increased strength for longer life. They also use solid pins for retention of the collars for a more secure design.

**Travel Motors.** Two-speed axial piston hydraulic motors provide the 385B drive power. Speed selection is automatic when the high-speed position is selected. Travel motors have internal disk brakes to hold the machine when stationary. The travel motors are protected from damage by rigid covers.

**Final Drives.** The final drives are a new compact design with three-stage planetary reduction. They incorporate the latest seal technology to prevent entry of dirt and loss of oil.

**Upper Frame.** The rugged main frame is designed for maximum durability and efficient use of materials. Robot welding is used for consistent, high-quality welds. The main channels are box sections connected by a large diameter tube in the boom foot area to improve rigidity and strength. The outer frame utilizes curved side rails for rigidity against bending and torsional loads.

## Hydraulics

*Caterpillar hydraulics deliver power and control to keep material moving at high volume.*

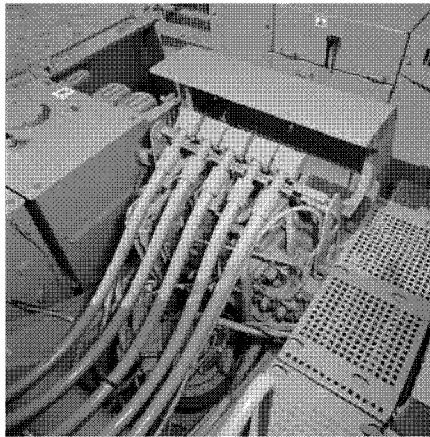


**Hydraulic System.** The 385B hydraulic system includes a three pump system with an independent swing circuit and a hydraulic circuit utilizing the proven Proportional Priority Pressure Compensated (PPPC) system, now with Caterpillar developed electronic control and activation to ensure high hydraulic system efficiency and excellent productivity.

**PPPC System.** The load sensing PPPC system provides the following features:

- Cylinder speed is directly related to operator's movement of the joystick from feathering to full speed
- Flow to cylinders during multifunctional operation is directly controlled by the operator and is not dependent on loads
- Controller reduces pump output to minimum to save power when joysticks are in neutral position

**Power Management Control.** The pump-valve electronic controller is central to power management control and provides highly efficient control for the pumps, valves and engine.



**Component Layout.** The hydraulic pumps, control valve and hydraulic tank are located close together to minimize the length of piping. The swing control valve is mounted directly on the swing motor. Main and swing pump suction and discharge lines have large diameters. These large diameters, combined with the component layout, guarantee high efficiency.

**Swing Performance.** The three-pump system with independent swing used on the 385B gives priority to the swing circuit for strong swing acceleration and easily controlled multi-function operation. This performance has been further enhanced by an increase in swing torque of approximately 16%.

**Heavy Lift Standard.** The operator can select the heavy lift mode at the push of a button to boost lifting capability and provide improved controllability.

**Auxiliary Hydraulics.** An auxiliary valve is standard. Control circuits are available as attachments, allowing operation of high pressure tools such as thumbs, hammers, shears and multi-processors. Flow settings for up to four tools can be programmed into VIDS™ for easy selection by the operator. A separate load sensing medium pressure circuit is also available for functions such as rotate.

**Hydraulic Oil Filtration System.** As standard, the 385B hydraulic system has six filters in four types. These filters improve reliability, extend the life of hydraulic equipment and hydraulic oil, boost performance and reduce running costs.

**Boom and Stick Lowering Control Devices (Attachment).** A Boom Lowering Control Device and Stick Lowering Control Device are available as attachments. These valves, which are mounted on the boom or stick cylinders, help prevent the boom and stick from falling in the event of hydraulic line or tube failure.

**Third Pedal for Straight Travel (Attachment).** A third pedal for straight travel is available as an attachment. This pedal allows straight machine travel using only a single pedal.